TENTH ANNUAL REPORT - Year Ended 31 March 1972

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

CONTENTS

GORDON M. SHRUM
Chairman

The front cover is a photograph of W.A.C. Bennett Dam and Williston Lake Reservoir at dusk, taken by Gary Otte. The photograph illustrates a major achievement in the ten years since B.C. Hydro was formed—harnessing the Peace River for hydro-electric generation. The Peace River Project—one of the largest developments of its kind in the world—has provided thousands of jobs during construction and has greatly stimulated industrial growth in British Columbia. Today, it supplies more than half the electricity generated by B.C. Hydro.

Dr. Gordon M. Shrum has been Chairman of B.C. Hydro since its inception and was responsible for coordinating the major resources that were required to plan and construct the Peace River Project.

The back cover includes a selection of photographs depicting highlights of the past ten years.

PROVINCE OF BRITISH COLUMBIA

PRIME MINISTER
VICTORIA

1 9 7 2

June 19th

Colonel the Honourable John R. Nicholson, P.C.,
O.B.E., Q.C., LL.D.,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present the Annual Report of British Columbia Hydro and Power Authority for the year ended 31st March 1972.

W. A. C. Bennett

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

Head Office: 970 Burrard Street, Vancouver 1, British Columbia, Canada

DIRECTORS AND OFFICERS

JOHN DUNSMUIR
*EINAR M. GUNDERSON
*THE HONOURABLE W. KENNETH KIERNAN
FRED D. MATHERS
*GORDON M. SHRUM *Chairman*
FREDERICK A. SMITH
*JOHN H. STEEDE
*THE HONOURABLE RAY G. WILLISTON
**Member of Executive Management Committee*

GEOFFREY G. WOODWARD *Secretary*
ELIZABETH B. FULWELL *Assistant Secretary*

Auditors: PRICE WATERHOUSE & CO.

Bankers: CANADIAN IMPERIAL BANK OF COMMERCE

Securities issued by British Columbia Hydro and Power Authority:
Registrar, Canadian issues: B.C. HYDRO
Registrar, United States issues: THE CANADIAN BANK OF COMMERCE TRUST COMPANY, New York

Securities issued by the former British Columbia Electric Company Limited:
Registrar, Callable Bonds: MONTREAL TRUST COMPANY
Registrar and Trustee, First Mortgage Bonds: MONTREAL TRUST COMPANY
Registrar and Trustee, Debentures: THE ROYAL TRUST COMPANY

Securities issued by the former British Columbia Power Commission:
Registrar: B.C. HYDRO

THE BUSINESS OF B.C. HYDRO AND THE AREAS SERVED

Electric Service

Generation and transmission of electricity.
Distribution of electricity throughout areas of British Columbia containing more than 90% of the population of the Province.

Gas Service

Distribution of natural gas in Greater Vancouver and in the Fraser Valley.
Distribution of liquefied petroleum gas-air in Greater Victoria.

Passenger Transportation Service

Urban bus service in Greater Vancouver and in Greater Victoria.
Interurban bus service in Greater Vancouver, in the Fraser Valley, between Vancouver and Victoria and between Vancouver and Nanaimo.

Rail Freight Service

Rail freight operations in Greater Vancouver and in the Fraser Valley.

British Columbia Hydro and Power Authority

OFFICE OF THE CHAIRMAN

970 BURRARD STREET
VANCOUVER 1, B.C.

16 June 1972

The Honourable W.A.C. Bennett, P.C., LL.D., D.Pol.Sc., K.St.J.,
Prime Minister of British Columbia,
Parliament Buildings,
Victoria, British Columbia.

Dear Sir:

The Board of Directors presents the Annual Report of British Columbia Hydro and Power Authority for the year ended 31 March 1972.

This Report marks completion of ten years since B.C. Hydro was formed. It has been a remarkable decade—a period that has seen expenditures for new plant exceed the total plant expenditures by all predecessors of B.C. Hydro from 1860 to 1962. Construction of the gigantic Peace River Project has spanned the ten years, and six generating units have been placed in operation to date. Two of the three Columbia River Treaty storage projects in British Columbia—Duncan and Arrow—have been completed in this period, and Mica Dam is nearing completion.

To keep pace with an 11.4% average annual growth in sales of kilowatt-hours, electric generating capacity has been increased steadily; total capacity is now two and one-half times what it was in 1962. In addition, more than 4,000 miles of electric transmission lines have been built since that time. There has also been a spectacular growth in the gas service, with an average annual increase of 10.8% in therms sold during this period.

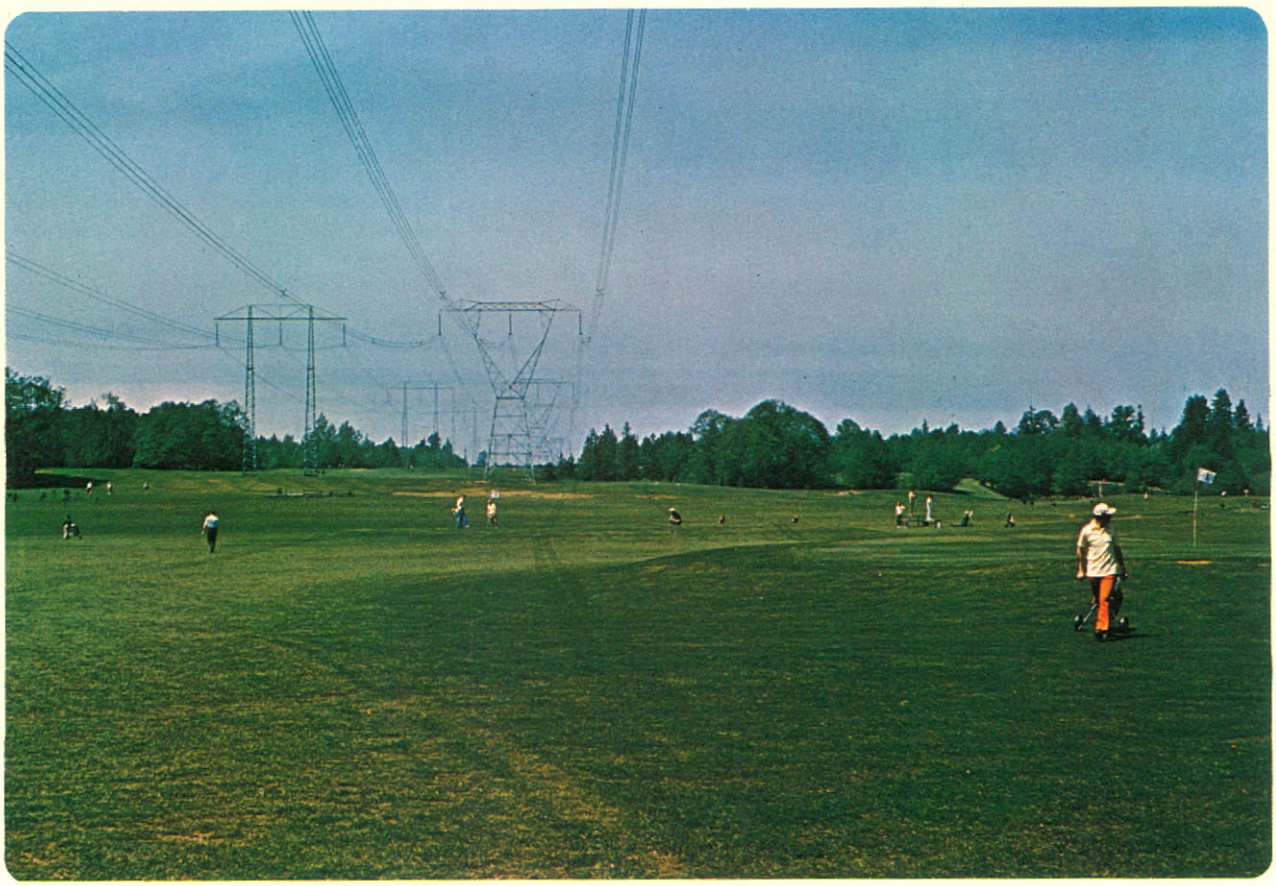
Perhaps the most notable change in the decade has been the growing public concern about environmental pollution. During this period of changing values and goals, we in B.C. Hydro also have become increasingly concerned about protection of the natural environment. More than ever before, we recognize our responsibility to construct and operate facilities in a manner that will not degrade but will tend to enhance the environment. The challenge will be to harmonize the goal of a healthy and attractive environment with the need to meet the energy requirements of a growing population in British Columbia.

Submitted on behalf of the Board of Directors.

CHAIRMAN

THE YEAR IN BRIEF

- Net income for the year was $16,755,890 compared with $16,084,686 for the previous year.
- Kilowatt-hours of electricity sold in British Columbia increased 10.9% over the previous year. Peak one-hour demand was up 7.3%.
- Electric operations were seriously hampered by severe winter storms in January 1972. The supply of power to the Lower Mainland and Vancouver Island remained critical for a week, but major brownouts and blackouts were avoided.
- Therms of gas sold increased 8.5% over the previous year. A record peak one-day output was established in January 1972.
- The number of passengers carried by the transportation services showed improvement.
- Expenditures on new plant amounted to $217,884,088 compared with $215,985,420 for the previous year.
- The sixth generating unit at Gordon M. Shrum Generating Station and the redeveloped hydro plant at Jordan River were placed in service. Total electric system generating capacity at year-end was 3,852 megawatts, up 9.6% during the year.
- Work on Mica Dam—the last of three Columbia River Treaty storage projects in British Columbia—proceeded on schedule.



Golfers at Surrey course are among thousands of British Columbians who share B.C. Hydro powerline rights-of-way.

ANNUAL REPORT OF BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

for the year ended 31 March 1972

RESULTS OF OPERATIONS

Net income for the year under review, after providing for all expenses, was $16,755,890 compared with $16,084,686 for the previous year. The net income was added to earnings employed in the business, and the corresponding funds were used for plant renewals and expansion to meet load growth.

Gross revenues for the year amounted to $305,921,799, an increase of $28,977,099 or 10.5% over the previous year.

The following table shows the principal sources of revenue and how this revenue was used in the operations of B.C. Hydro:

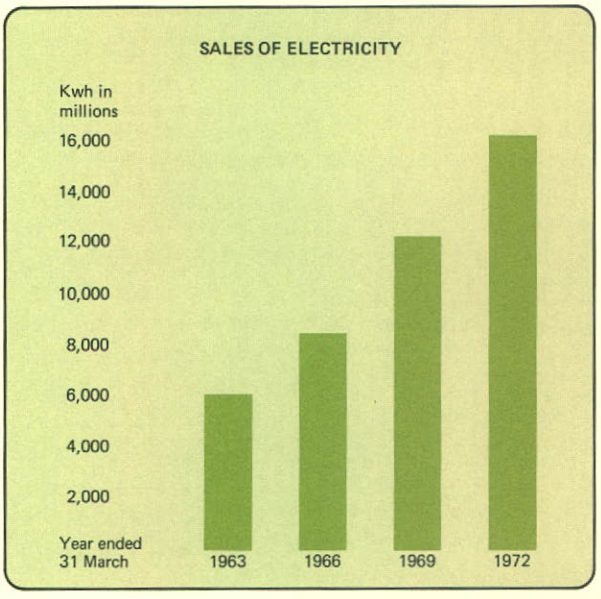
	Year Ended 31 March 1972	Year Ended 31 March 1971
Where the revenue came from:		
Sale of electricity to residential customers	**$ 84,926,714**	$ 78,296,177
Sale of electricity to other customers	**126,498,675**	114,677,428
Sale of gas	**51,726,999**	47,513,551
Transportation of urban and interurban passengers	**24,147,419**	21,307,358
Rail freight operations	**10,219,984**	8,001,617
Interest on temporary investments	**4,839,994**	3,100,842
Miscellaneous	**3,562,014**	4,047,727
	$305,921,799	$276,944,700
How the revenue was used:		
Salaries, wages and employee benefits	**$ 67,549,011**	$ 57,948,278
Materials and services	**50,964,886**	45,214,693
Grants, school taxes, etc.	**20,013,289**	18,594,109
Interest on debt, less interest charged to construction	**97,698,088**	88,901,465
Depreciation of plant	**52,940,635**	50,201,469
Employed in the business	**16,755,890**	16,084,686
	$305,921,799	$276,944,700

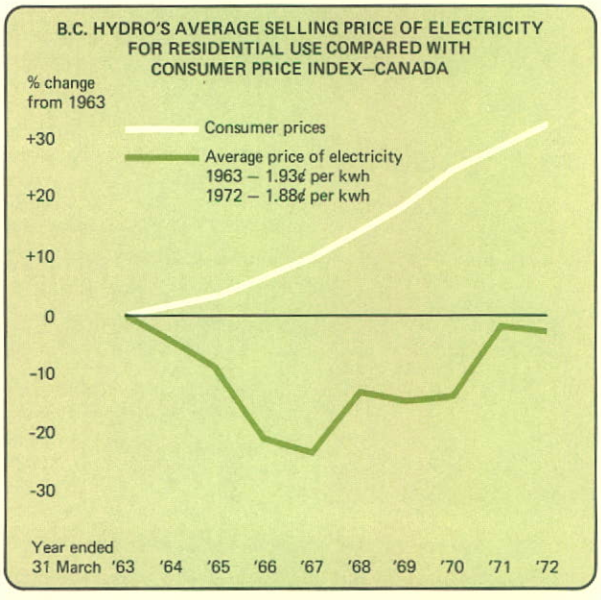
Sales of Electricity

The rate of growth in requirements for electricity, after abating somewhat in 1970, resumed the trend experienced in the latter part of the 1960's. Sales of kilowatt-hours of electricity in British Columbia increased 10.9% over the previous year, approximately the same as the average annual increase during the ten years since B.C. Hydro was formed. Gross revenues from the electric service were $211,425,389, up 9.6% from the previous year.

The following table shows kilowatt-hour sales in British Columbia and percentage increases over the previous year, by categories:

	Year Ended 31 March 1972 Kwh in Millions	% Increase Over Previous Year
Residential	4,514	9.6
Commercial	3,484	11.0
Industrial	7,794	12.3
Other	181	—
	15,973	10.9





New commercial developments in downtown Vancouver increase demand for electricity.

We were serving 725,822 customers with electricity at 31 March 1972, whereas when B.C. Hydro was formed in 1962, there were 442,947 customers. Average annual consumption by residential customers has grown in ten years from 4,829 kwh to 7,342 kwh, up 52%. These comparisons illustrate the tremendous growth experienced by B.C. Hydro during the past decade.

Electric space heating for houses and apartments in our service area continued to make substantial gains. During the year, the number of residential electric heating accounts increased 15%, resulting mostly from new construction. The use of electricity for space heating, water heating and air conditioning in commercial premises also showed a marked increase.

Regional Development

British Columbia's economy in 1971 recovered considerably from the moderated rate of growth in 1970. Strong gains in capital investment and consumer spending provided much of the economy's strength during the year. The construction industry recorded impressive gains over 1970—housing starts were up 27%, and commercial and industrial building activity showed similar trends. The population of the Province rose an estimated 2.8% during the year compared with 1.3% for the rest of Canada.

A continued high level of housing starts in Canada and the United States is anticipated for 1972. As a consequence, prospects are encouraging for manufacturers of wood products in British Columbia. In the pulp and paper industry, new capacity is scheduled to come into production in 1972 at Kamloops, Mackenzie and Quesnel. A development in the forest industries is an increasing interest in the use of wood waste for generation of electricity in their plants.

Although world markets softened, the value of British Columbia's mineral production increased in 1971 for the thirteenth consecutive year, particularly in coal, zinc and copper. On northern Vancouver Island, the open-pit copper mine of Utah Mines Ltd. commenced operation in 1971. In the East Kootenay area, the coal mine of Fording Coal Limited began production early in 1972. In the Highland Valley, development of a copper-molybdenum mine by Lornex Mining Corporation Ltd. progressed during the year, with production scheduled for 1972; this will be the largest nonferrous mine in Canada in terms of milling capacity. The development by Lornex has resulted in a new community at Logan Lake, with 225 customers receiving electricity from an underground distribution system. Also planned for production in 1972 are a copper mine of Similkameen Mining Company Limited, near Princeton; a copper-molybdenum mine of Gibraltar Mines Ltd., near McLeese Lake; a copper mine of Noranda Mines Limited, at Babine Lake; and an expansion of the copper mine of Granisle Copper Limited, also at Babine Lake. Development of major new mines in British Columbia is expected to add approximately 150,000 kw to our electric load in 1972.

Effective use of outdoor lighting is demonstrated at motor hotel in Williams Lake.

The management of Canadian Pacific Limited is considering the feasibility of electrifying the main line between Field and Golden by 1976, and through to the West Coast by 1980. We are participating in studies with Canadian Pacific to define responsibilities for construction of electric systems to supply this load.

In the Lower Mainland, a number of large commercial developments, including office buildings, hotels and shopping centres, are being built or planned. Work continued in downtown Vancouver on the installation of electric circuits to Royal Centre, Project 200 and Bentall Centre Tower III. We were also engaged in planning systems to supply electricity for future developments, including Pacific Centre North and the British Columbia Building.

In July 1971, B.C. Hydro acquired the electric distribution system serving 114 customers at Zeballos; responsibility for generation is shared with Tahsis Company Ltd. In September 1971, the electric distribution system serving 146 customers in the Newgate-Roosville area in British Columbia was purchased from Lincoln Electric Cooperative Inc. of Montana. On 1 February 1972, we assumed responsibility for operating the electric system in Revelstoke—serving some 2,500 customers; we are planning improvements in the system to meet load growth and to increase reliability of service.

Other communities added to our system during the year included Elkford, Nass Camp, New Aiyansh and Nimpo Lake.

B.C. Hydro plans to improve newly acquired electric distribution system at Revelstoke.

Rural Electrification

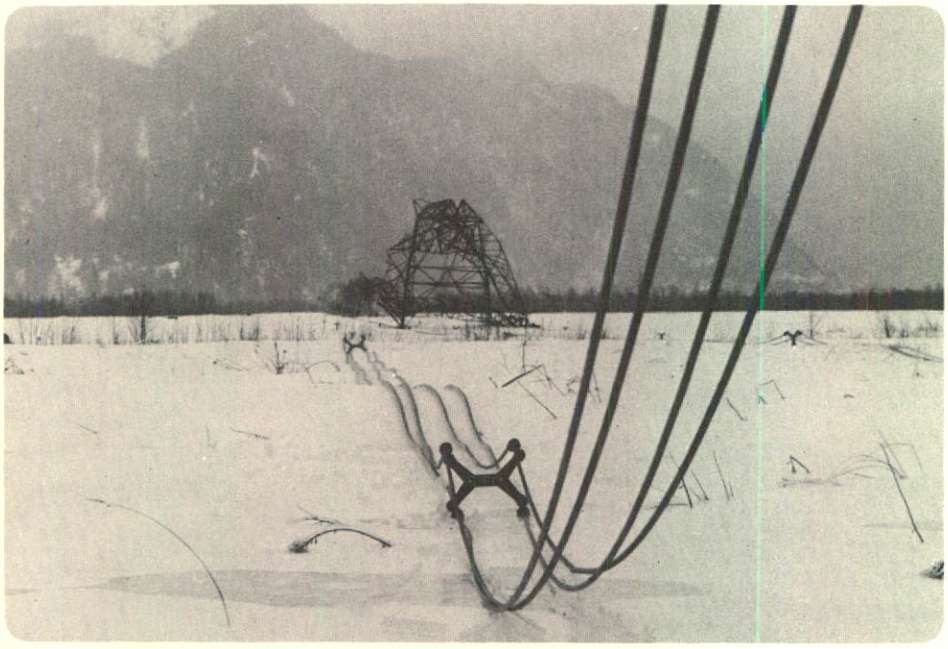
During the year ended 31 March 1972, the Government of British Columbia made a grant of $2,000,000 to B.C. Hydro to provide financial assistance for rural electrification. This grant enabled B.C. Hydro to extend financial help during the year to 150 projects serving 772 customers along 480 miles of distribution lines. The projects included an extension to serve 56 customers at the Tache and Pinchi Indian Reserves at Stuart Lake, near Fort St. James, and a community self-help undertaking to provide service to 91 customers in the Ootsa Lake area south of Burns Lake. For the coming year, the Provincial Government has increased the grant to B.C. Hydro for rural electrification to $3,000,000. The additional funds will enable us to extend the benefits of electric service to many more residents in rural areas of the Province.

Storm Damage

A critical situation, threatening supply of electricity to the Lower Mainland and Vancouver Island, developed in our electric system in January 1972. The worst icing conditions in years in the Fraser Valley and a snowslide near Squamish severely disrupted the system, damaging 27 transmission towers and cutting both 500 kv transmission lines from the Peace River. At the same time, the storms knocked out two of the three transmission lines from the Bridge River plant, compounding an already serious situation. Many distribution circuits also were damaged by the storms.

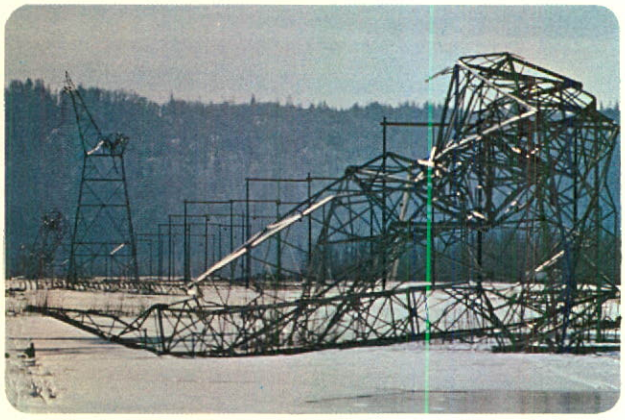
During the crisis that followed, we purchased all available power from other utilities and pressed Burrard, Port Mann and Georgia thermal plants into full production. The supply of power to the Lower Mainland and Vancouver Island remained critical for a week, but with assistance and cooperation from other utilities, our customers, maintenance crews and many contractors and suppliers, we were able to avoid major brownouts and blackouts.

We express our gratitude to all the customers who cooperated by reducing their use of electricity; to the men who worked under difficult conditions to make emergency repairs; to the many suppliers who rushed materials to us; and to the member utilities of the Northwest Power Pool in the United States, West Kootenay Power and Light Company, Limited and Calgary Power Ltd. who provided electric energy during the crisis.



Heavy icing in Fraser Valley downed towers and conductors on one line from Peace River.

Emergency line repairs near Squamish ended power crisis.



Temporary line was built to replace damaged section.

Head office lights expressed Hydro's thanks to public for cooperation during January power supply crisis.

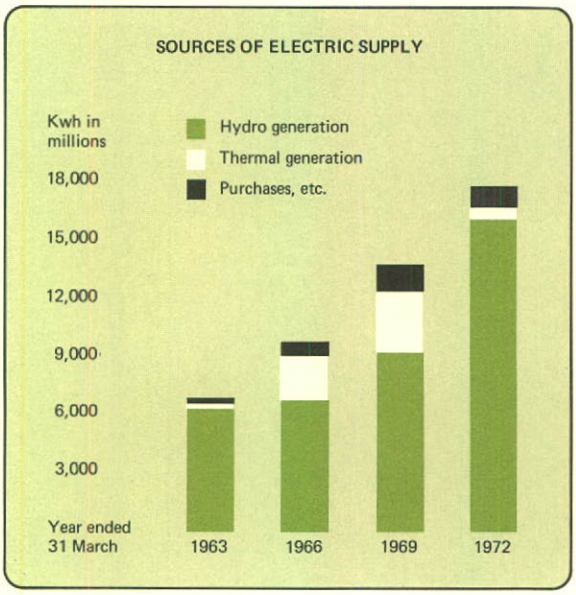
Generation and Supply of Electricity

Demand for electricity during the year totalled 17,977 million kwh compared with 16,564 million kwh during the previous year. The following table shows requirements for energy and sources of supply for the year under review:

	Kwh in Millions	% of Total
Requirements for Energy:		
Sales to customers	15,973	88.9
Export of surplus	201	1.1
Line loss and system usage	1,803	10.0
	17,977	100.0
Sources of Supply:		
Hydro generation–		
Peace River Project	9,036	50.3
Other	7,185	40.0
Thermal generation	721	4.0
Purchases, etc.	1,035	5.7
	17,977	100.0

As shown above, more than 90% of the electricity delivered during the year was from hydro plants, one of the most pollution-free sources of electric energy. Approximately 50% of the energy came from Gordon M. Shrum Generating Station on the Peace River, where a sixth 227,000 kw generating unit became operational in December 1971. Power generated at other hydro plants during the year was up 24.7% from the previous year, primarily because of improved inflow of water to reservoirs; as a consequence, we were able to meet the demand for electricity with less thermal generation than had been anticipated. On southern Vancouver Island, the redeveloped Jordan River hydro plant was placed in service in December 1971, providing 150,000 kw of peaking capacity.

Installed nameplate generating capacity of our system at 31 March 1972 totalled 3,852,364 kw, up 9.6% from the previous year. The highest one-hour demand ever recorded on the integrated system, 2,970,000 kw, occurred on 20 December 1971. This represented an increase of 7.3% over the previous one-hour peak, established in January 1971.



Jordan River plant provides additional peaking capacity.

GAS SERVICE

Gross revenues from the sale of gas to the public were $51,726,999, up 8.9% from the previous year, while therms of gas sold rose 8.5%. The weather, which has a marked influence on sales of gas for heating, was colder than normal, particularly during the prime heating months from October to March. The number of degree days recorded at Vancouver International Airport during this period was 5.4% more than normal.

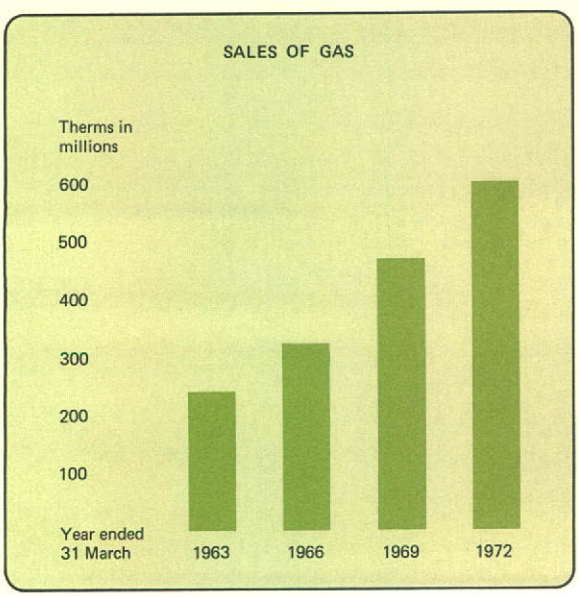
The peak one-day output of gas in the Lower Mainland during the year, excluding interruptible loads and gas delivered to Burrard Thermal Generating Plant, was 3.1 million therms on 25 January 1972, exceeding the previous record peak of 2.9 million therms in December 1968.

In the Lower Mainland, gains were recorded during the year in sales of gas for all categories of customers. Therms sold to residential consumers increased 9.2%, reflecting the installation of gas heating in 7,233 new houses and the conversion to natural gas of furnaces in 2,262 houses. Consumption by commercial customers increased 13.5% during the year, with natural gas chosen to heat 6,735 new apartment suites and many other new commercial buildings; in addition, 1,472 existing apartment suites were converted to use this fuel. Interruptible gas represented 28.2% of total therms sold during the year in the Lower Mainland.

When B.C. Hydro was formed, we served 128,939 customers from 2,617 miles of gas distribution mains; at 31 March 1972, ten years later, we were serving 214,978 customers from 3,780 miles of mains.

In its first year of operation, the liquefied natural gas storage plant on Tilbury Island in Delta was used to supply 6.8 million therms of gas in December and January. By utilizing this plant, we were able to reduce the demand for gas from Westcoast Transmission Company Limited during periods of peak load and thereby minimize the cost of gas. B.C. Hydro purchases natural gas from Westcoast under a long-term agreement.

B.C. Hydro submitted to the Provincial Government a proposal to construct and operate a pipeline to supply natural gas to Vancouver Island and Powell River from our existing gas transmission system in the Lower Mainland. At year-end, preparations were under way to present an application to a formal hearing before the Public Utilities Commission in May 1972.



Trial vehicle runs on natural gas to cut air pollution.

TRANSPORTATION SERVICES

Urban Transportation

Gross revenues from urban transportation services amounted to $16,876,098, up 9.7% from the previous year. In addition, the Government of British Columbia again made a grant of $2,000,000 to B.C. Hydro to assist in alleviating losses on the urban transit services. Passengers carried totalled 72.6 million, an increase of 10.1% over the previous year. Comparisons of results for the past two years are distorted, however, because of the impact on the previous year's results of a strike by members of the Amalgamated Transit Union from 4 January to 5 February 1971. In recent months, there has been a steady recovery in passenger riding following a decline after the strike in 1971; the outlook is for a continuation of the improved trend.

A number of special services were offered in the Greater Vancouver area during the year in an attempt to attract riders and relieve traffic congestion. A free downtown shoppers' bus service was introduced in the summer months and again during the Christmas shopping period; the service was sponsored by the Downtown Business Association and the City of Vancouver. The T. Eaton Company Limited chartered our entire Mainland urban system and offered free rides for one hour on 28 September 1971 to open a major sale event. In cooperation with the City of Vancouver and the Pacific National Exhibition, a park and ride express service was introduced on 3 March 1972 to operate between the Pacific National Exhibition parking lot and the downtown business district during rush-hour periods; by year-end, more than 500 passengers from 331 private vehicles were using this service on weekdays.

Park and ride service inaugurated to ease rush-hour traffic congestion proved popular.

Interurban Transportation (Pacific Stage Lines)

Gross revenues from interurban transportation services rose 34.4% to $5,271,321 during the year. This increase reflects mainly expansion in November 1970 of our services between Vancouver and Victoria and between Vancouver and Nanaimo (via ships of the British Columbia Ferry Authority), when Vancouver Island Coach Lines withdrew from the previous joint operating arrangements. Sightseeing, charter and escorted tour services showed gains in revenue during the year, as coordinated promotional programs made the public more aware of the many services provided by Pacific Stage Lines. There was also a modest increase in passengers carried on the Greater Vancouver and Fraser Valley routes.

Nine diesel buses were purchased during the year to augment the expanded cross-water services between Vancouver and Vancouver Island.

Rail Freight

Gross revenues from rail freight operations amounted to $10,219,984 for the year, an increase of 27.7% over the previous year, while volume of freight hauled totalled 2,605,718 tons, up 18.4%. The increase in rail freight traffic reflects the diversion of ocean freight to Vancouver and New Westminster for reshipment over our rail lines to

destinations in the United States, brought about by strikes of longshoremen at west coast ports in the United States. The strike by members of the Amalgamated Transit Union in the previous year resulted in a reduction in revenues, which affects the comparison with the year under review.

Powerful diesel locomotive was acquired for use on Fraser Valley rail freight routes.

A 2,000 horsepower, 180-ton diesel locomotive—twice as powerful as any of our other locomotives—was acquired in November 1971 for use on Fraser Valley routes. This brings to 18 the total number of diesel locomotives owned by B.C. Hydro.

Effective 1 April 1972, responsibility for managing our rail freight service was transferred to British Columbia Railway Company. The primary purpose of this arrangement is to obtain the benefits of unified management in the development of Provincial railways.

COST OF PROVIDING SERVICES

The total cost of providing all services during the year was $289,165,909, an increase of $28,305,895 or 10.9% over the previous year.

Operations were materially affected by the extreme winter storms in January 1972. Costs attributable to the storms amounted to approximately $3.2 million, including labour and materials to repair transmission and distribution lines, power purchased from other utilities and additional costs associated with thermal generation.

Interest and other costs on debt charged to operations during the year were $97,698,088, up $8,796,623 or 9.9% over the previous year. Provision for depreciation of plant was $52,940,635 compared with $50,201,469 for the previous year, an increase of 5.5%. Increases in interest charges and provision for depreciation are related to the completion and transfer to active service of new plant and to property acquisitions.

Grants, school taxes and water rentals charged to operating expenses totalled $20,013,289, an increase of $1,419,180 or 7.6% over the previous year. The increase was caused mainly by additions of property and generally higher assessments on property.

Salaries, wages and employee benefits charged to operations amounted to $67,549,011, an increase of $9,600,733 or 16.6% over the previous year. The increase reflects higher rates of pay and a supplement in pensions to superannuated employees, but the comparison is distorted by the impact on the previous year's costs of the strike by members of the Amalgamated Transit Union.

Purchases of natural gas from Westcoast Transmission Company Limited totalled $21,349,347, of which $20,499,497 was for gas sold to the public—an increase of 6.5% over the previous year. The remainder of the gas purchased was used principally at Burrard Thermal Generating Plant. The increase in cost of gas purchased reflects continuing growth in the consumption of gas.

FINANCING

Sinking fund bonds totalling $166,182,000 were sold during the year to Provincial Government investment funds. The average effective annual interest cost of all long-term bonds sold by B.C. Hydro during the year was 7.09% compared with an average of 7.62% for the previous year.

During the year, $23,971,686 was paid to Trustees to meet sinking fund requirements of long-term debt. All sinking fund obligations have been met.

Bonds and other securities issued by B.C. Hydro and its predecessors are unconditionally guaranteed as to principal and interest by the Province of British Columbia.

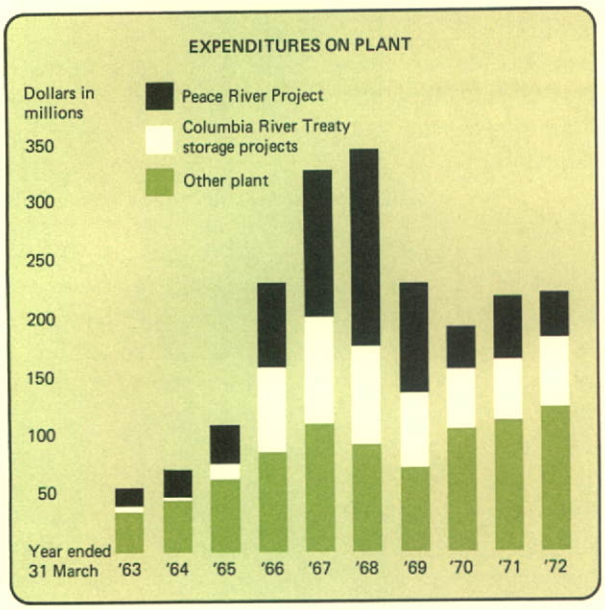
CONSTRUCTION PROGRAM

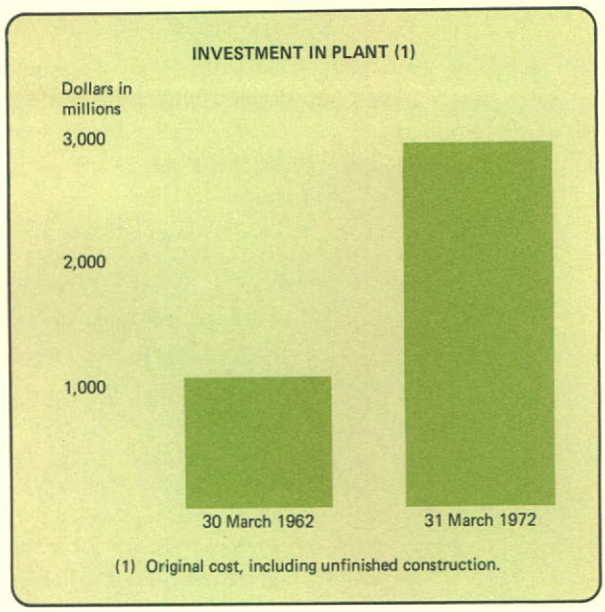
Expenditures on plant additions, land and improvements totalled $217,884,088 compared with $215,985,420 for the previous year. Net property additions were $209,506,729 after deducting plant retirements of $8,377,359. Major expenditures for the year by projects or broad classifications included the following:

Peace River Project	$34,309,293
Columbia River Treaty storage projects	61,148,375
Mica generating plant	12,616,871
Jordan River redevelopment	10,966,323
Kootenay Canal generating plant	5,511,653
Whatshan redevelopment	5,081,960
Major electric transmission lines–	
Nelway to Cranbrook to Natal to Alberta border–230 kv	4,959,042
Mica to Ingledow and Meridian–500 kv	3,525,139
Nicola to Princeton to Newmont–230 kv and 138 kv	2,422,038
Jordan River to Goward–138 kv	1,802,179
Kelly Lake to 100 Mile House–230 kv	1,785,481
Other	8,390,210
Substations, associated distribution facilities and local transmission systems	29,108,084
Electric extensions to serve new customers	17,678,637
Gas extensions to serve new customers	5,728,193
Gas system renewals and alterations	2,262,180
Diesel locomotive and other rail freight plant additions	1,484,545

The collective labour agreements between the Allied Hydro Council of British Columbia (representing 17 unions) and Peace Power Constructors Ltd. and Columbia Hydro Constructors Ltd. (representing B.C. Hydro and contractors on our major construction projects) were renegotiated in 1971. The no-strike, no-lockout agreements, which since 1962 have minimized work stoppages on the Peace and Columbia projects, were extended up to 31 December 1977. Generally, the agreements stipulate that wages, employee benefits and working conditions will be the same as those prevailing for the various trades in the construction industry in the Province.

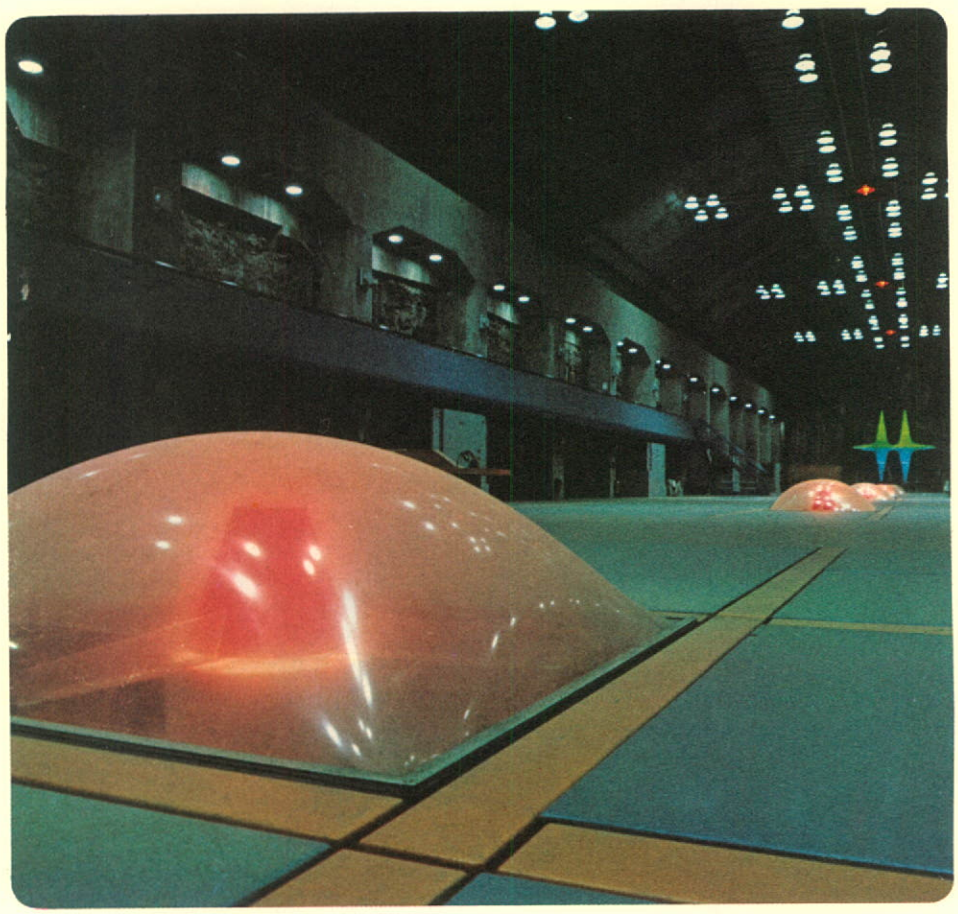
Design engineering and construction inspection on most of our construction projects are carried out by International Power and Engineering Consultants Limited, a wholly owned subsidiary of B.C. Hydro.





Peace River Project

The sixth 227,000 kw generating unit was placed in service in the underground powerhouse at Gordon M. Shrum Generating Station in December 1971, bringing the nameplate capacity of this plant to 1,362,000 kw. Work is proceeding on installation of the seventh and eighth 227,000 kw generating units, scheduled for operation in 1972. Contracts were awarded for supply and installation of the ninth unit, with a nameplate rating of 300,000 kw, which is planned for operation in 1974. A tenth unit can be added later, as needed.



Plexiglass bubbles shield units at Gordon M. Shrum Generating Station on Peace River.

Construction of four series capacitor stations—Kennedy, McLeese, Chapmans and Creekside—continued during the year. The stations, located along the two 500 kv transmission lines from Gordon M. Shrum Generating Station to Ingledow Substation, in the Lower Mainland, will increase transmission capability of the lines to keep pace with the increased output from Gordon M. Shrum Generating Station. Initial installation of capacitor equipment will be completed in all four stations in 1972; additional phases of the work are scheduled for service in 1974.

After a nine-month adjournment because of the plaintiff's application to amend the pleadings, the trial of the lawsuit initiated on 17 July 1967 by Northern Powerplant Builders against B.C. Hydro resumed on 10 January 1972. This lawsuit is for additional remuneration, damages and declarations as to the contractor's rights with respect to the contract for construction of the underground powerhouse and associated works.

Columbia River Treaty Storage Projects

The Columbia River Treaty between Canada and the United States called for construction of three storage projects in Canada—Duncan, Arrow and Mica—to regulate river flow for both hydroelectric generation and flood control purposes. B.C. Hydro completed the Duncan and Arrow storage projects well in advance of the scheduled dates, and the Mica project is scheduled for completion by 1 April 1973.

Spillway structure was virtually completed as workmen prepared for final year of construction on huge Mica Dam.

Construction of Mica Dam progressed satisfactorily during the year. By the end of the construction season in November 1971, the dam had reached a height of 640 feet of an ultimate 800 feet above bedrock; and of the 42,700,000 cubic yards of fill required to complete the dam, all but 5,600,000 yards had been placed. Construction of the spillway structure, including installation of three large radial gates, was virtually completed. Placement of concrete for the intake and outlet works progressed favourably.

The Duncan and Arrow storage projects were operated throughout the year in accordance with power and flood control operating plans prepared and implemented by the Canadian and United States Entities under provisions of the Columbia River Treaty.

A nesting habitat and resting area for waterfowl at Duck Lake—to replace marshland flooded by water in the reservoir behind Duncan Dam—was completed by B.C. Hydro and turned over to the Creston Valley Wildlife Management Area Authority. The development will provide a necessary link in the annual migration of ducks, geese and other waterfowl.

Other Major Electric Service Plant Additions

Redevelopment of the hydroelectric generating plant at Jordan River on southern Vancouver Island was completed. The new station, which provides 150,000 kw of peaking capacity, was placed in service in December 1971. This brings to 1,071,000 kw the total capacity, including interconnections from the Mainland, available to serve the growing loads on Vancouver Island.

Redevelopment of Whatshan Generating Station in the southern interior of the Province progressed satisfactorily during the year. The project, which includes construction of a new powerhouse and installation of a 50,000 kw generating unit, is scheduled for completion in the autumn of 1972.

Engineering was continued on the design of generating facilities at Mica. A contract for supply and installation of the first four 435,000 kw generators was awarded to Canadian General Electric Company Limited. Contracts for four turbines and governors were awarded, two each, to V/O "Energomachexport" of the Union of Soviet Socialist Republics and C. Itoh & Co., Ltd. of Japan. Work was started on construction of a bridge to the right bank of the Columbia River and on access roads and tunnels to the area to be excavated for the powerhouse. The first two generating units at Mica are planned for service in 1976, and two more in 1977. Clearing of rights-of-way for two 500 kv transmission lines from Mica to the Lower Mainland was commenced in 1971; construction of the lines is scheduled to start in 1973.

In 1971, with the cooperation of the Provincial Government, an understanding was reached between the Provincial Government, B.C. Hydro, Cominco Ltd. and West Kootenay Power and Light Company, Limited relating to a hydroelectric development by B.C. Hydro on the Kootenay River between Nelson and Castlegar. This development includes construction of a three-mile-long canal, an aboveground powerhouse and installation of four 125,000 kw generating units. The site was cleared, and roads and an access bridge were under construction at year-end. Contracts were awarded to Canadian General Electric Company Limited for supply and installation of the generators and to Mitsubishi Canada Limited for supply and installation of the turbines and governors. Two generating units are scheduled for operation in 1975, and two in 1976.

At Burrard Thermal Generating Plant, a sixth 150,000 kw unit is scheduled for service in 1974, which will bring the capacity of the Burrard plant to 900,000 kw. To provide increased peaking and standby capacity at Prince Rupert, we plan to install two 28,600 kw gas turbine generating units—one in 1973 and the other in 1974. We also plan to install a 40,500 kw gas turbine generating unit at Port Hardy in 1973.

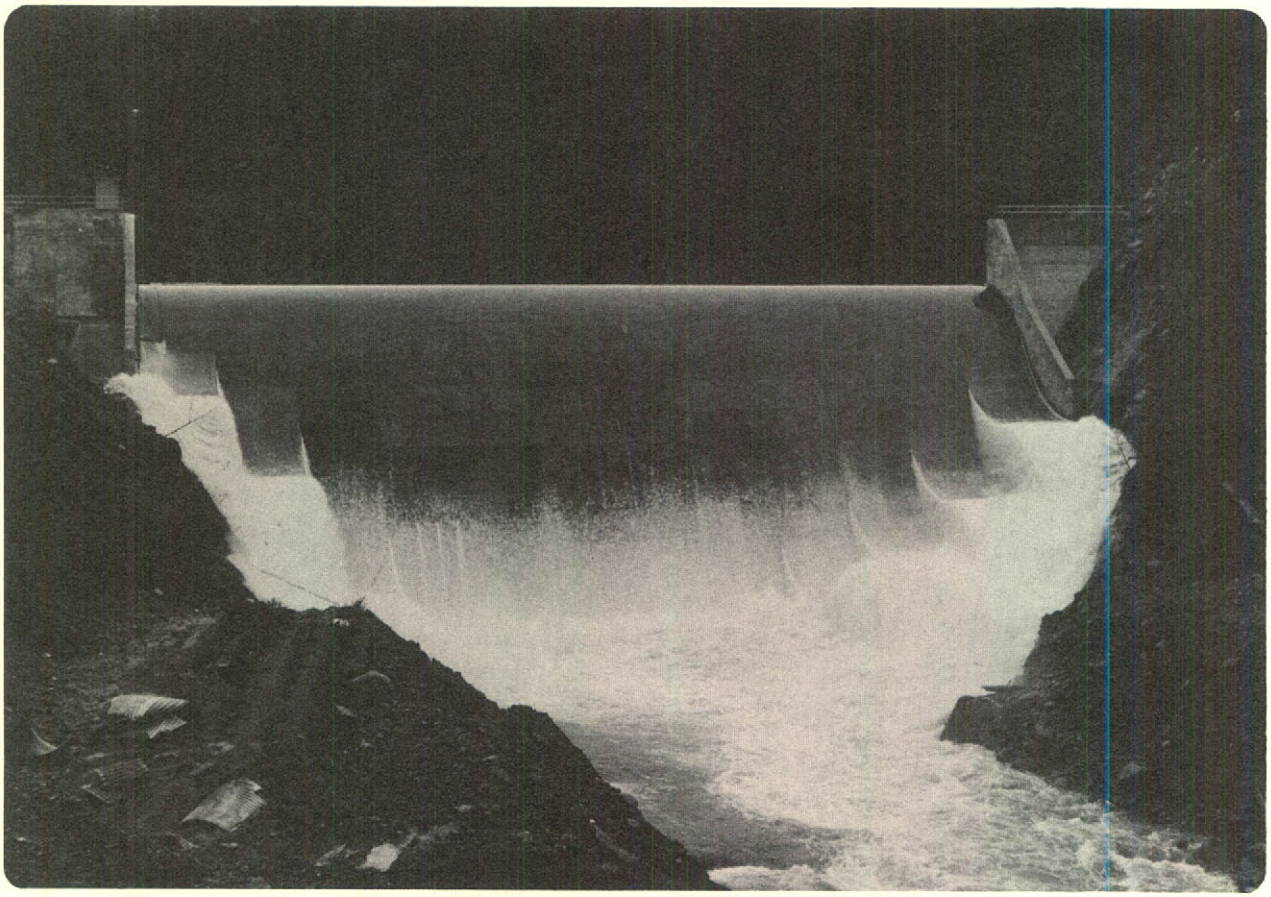
There are 18 communities served by B.C. Hydro that are not connected to the integrated electric system but are supplied by diesel-electric plants. Additional units were installed during the year to meet growing loads at Fort Nelson, Hazelton, Masset and Port Clements.

To complement the expansion of electric generating facilities, significant extensions and reinforcements were made to the Provincial transmission grid during the year under review. On Vancouver Island, a 138 kv line was constructed to transmit power from the redeveloped Jordan River hydroelectric plant to load centres in Victoria. A 230 kv line is scheduled to be built in 1973 between Goward and Horsey Substations, to improve reliability of service to the Greater Victoria area. Construction of a 138 kv line between Gold River and Tahsis (35 miles) was nearing completion at year-end.

In the southern interior of the Province, we completed a 230 kv transmission line from Nelway, near the international boundary, to Cranbrook (100 miles). We plan to extend this line in 1972 from Cranbrook to Natal (50 miles) and in 1973 to the Alberta border, where it will connect with the transmission system of Calgary Power Ltd. Other lines completed in the southern interior were a 230 kv line from Nicola to Princeton (53 miles) and a 138 kv line from Vavenby to Barriere (54 miles).

In the central interior, we completed a 230 kv transmission line from Kelly Lake to 100 Mile House (53 miles) and a 138 kv line from Fort St. John to Boundary Lake (31 miles). Engineering was in progress for 138 kv lines between Smithers and Hazelton, to connect Hazelton to the integrated electric system; and between Fort St. John and Dawson Creek, to complete a 138 kv loop joining Gordon M. Shrum Generating Station, Chetwynd, Dawson Creek and Fort St. John and to improve security of supply to these centres.

A contract was awarded in December 1971 for construction of a new administration centre on a 15-acre site in Vernon, with completion planned for 1973. The new centre will provide space for engineering, construction, production, distribution and administrative staff. The larger facilities are required to meet the needs of the rapidly growing southern interior area.



Redevelopment of generating station at Jordan River on Vancouver Island included construction of Elliott Dam.

A new joint-use pole agreement was concluded in February 1972 between British Columbia Telephone Company and B.C. Hydro. Under this agreement, the two utilities will expand an arrangement for jointly owning poles and sharing the cost of construction and maintenance. The agreement also provides for joint planning of pole distribution lines, to ensure that two separate lines are not built where one would serve customers needing both telephone and electric service. Savings from joint use and ownership will help control rising construction and operating costs.

Major Contracts

Major contracts awarded during the year included:

	Dollars in Thousands
Canadian General Electric Company Limited *Supply and installation of generators, Mica generating plant*	14,200
English Electric-AEI Canada Limited *Supply and installation of steam turbine generator set, Burrard Thermal Generating Plant*	8,000
C. Itoh & Co., Ltd. *Supply and installation of turbines and governors, Mica generating plant*	7,800
Canadian General Electric Company Limited *Supply and installation of generators, Kootenay Canal generating plant*	7,500
Mitsubishi Canada Limited *Supply and installation of turbines and governors, Kootenay Canal generating plant*	7,300
Mica Dam Contractors *Construction of powerhouse access tunnels and roads, Mica generating plant*	6,400
United Aircraft of Canada Limited *Supply and installation of gas turbine generating units and construction of powerhouse building, Prince Rupert (two contracts)*	6,100
V/O "Energomachexport" *Supply and installation of turbines and governors, Mica generating plant*	5,300
Combustion Engineering-Superheater Ltd. *Supply and installation of steam generator, Burrard Thermal Generating Plant*	4,900
Nissho-Iwai Co., Ltd. *Supply and installation of generator, turbine and governor, Peace River Project (two contracts)*	4,700
Oy Nokia Ab *Supply of 500 kv series capacitors, Peace River Project (two contracts)*	4,000
Curtiss-Wright Corporation *Supply and installation of gas turbine generating unit and construction of powerhouse building, Port Hardy*	3,700
Gustavus Construction Ltd. *Construction of administration centre, Vernon*	1,400
Westinghouse Canada Limited *Supply of 230 kv generator transformers, Kootenay Canal generating plant*	1,200
Tyee International Contractors Ltd. *Construction of 230 kv transmission line, Cranbrook to Natal*	1,100
Imperial Oil Limited *Supply of petroleum products, Kootenay Canal generating plant*	1,100

CORPORATE ORGANIZATION

On 4 June 1971, Mr. J. Peter Ottesen resigned from the position of Manager, Construction Division to accept a position in West Pakistan.

Mr. Eric H. Martin was appointed Manager, Construction Division on 5 June 1971, succeeding Mr. Ottesen. Prior to this appointment, Mr. Martin was Manager, Construction Department.

Effective 1 February 1972, Mr. J. Norman Olsen was appointed Manager, Distribution Division. Prior to his present appointment, Mr. Olsen was Manager, Administration Division.

On 1 February 1972, Mr. Desmond G. McKillop, formerly Manager, Productivity Services, was appointed Manager, Administration Division, succeeding Mr. Olsen.

For some time, the Board of Directors had contemplated the need for an independent review of organizational performance. A firm of management consultants was engaged to undertake the assignment, which commenced in September 1971.

EMPLOYEES

New collective agreements were concluded during the year with Amalgamated Transit Union (Pacific Stage Lines), Brotherhood of Locomotive Engineers, International Brotherhood of Electrical Workers, International Brotherhood of Electrical Workers (Gas), Office and Technical Employees' Union, Registered Nurses' Association of British Columbia and United Transportation Union. These agreements were for varying periods of up to 36 months and provided for increases in wages generally ranging from 6% to 7.9% for each step of the respective contract periods, as well as improvements in employee benefits.

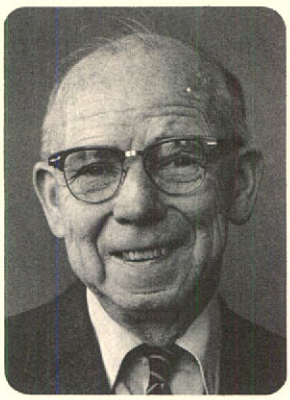
The settlement with the International Brotherhood of Electrical Workers involved lengthy negotiations and two separate strike periods. The first strike period, 2 June to 1 July 1971, began with rotating strike action and progressed to a full-scale, nine-day walkout; the second was from 4 to 7 October 1971. Supervisory and professional staff kept the electric system operating during these strike periods. The Honourable Mr. Justice Nathan T. Nemetz, who agreed to be sole arbitrator in the dispute, handed down a binding award on 16 November 1971. The award was for 24 months; it provided for increases in wages in two steps totalling 16.4% and improvements in employee benefits.

A total of 142 employees retired on pension during the year; of these, 15 had service of 40 years or more. The following had served for more than 45 years:

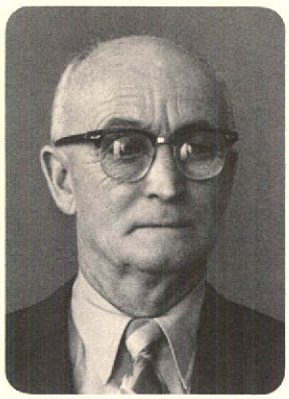
WILLIAM ROBERT CULBERT, *Agent, New Westminster and Fraser Valley—48 years, 9 months*

CYRIL PERCIVAL PADMORE, *Freight Claims Investigator—48 years, 5 months*

WILLIAM WALMSLEY CARTMELL, *Senior Residential Representative—47 years*



W.R. CULBERT



C.P. PADMORE

W.W. CARTMELL

The ten years since B.C. Hydro was formed have seen great changes in the scope and complexity of our operations. The Directors wish to record their sincere appreciation of the contribution by employees to the growth and success achieved during this decade.

Perhaps the most significant change that has occurred during the past decade has been the growing public awareness of the consequences of environmental pollution. B.C. Hydro believes the current concern over the environment is not only justified but long overdue.

Industrial growth, advancing technology, increasing population and expanding urbanization all depend upon an ever greater supply of energy. Until recently, these forces were considered the unquestioned symbols of progress. Now, man is learning that part of the price of this progress is a deterioration of his surroundings through air pollution, water pollution, soil pollution, noise pollution and visual pollution.

Picnic sites and hiking trails are planned for Lake Buntzen reservoir recreation area.

There is public concern about the effects on the environment of generation, transmission and distribution of electric power. If, however, people are to advance socially and economically, there will be an increasing demand for electricity, because a rising standard of living results in a greater use of electricity per capita. Another important reason for the increasing demand for electricity is growth in population, and British Columbia is destined to continue as one of the most rapidly growing areas in North America. If demand for electric power continues to increase at the present rate, our total generating capacity will have to be doubled every seven years.

B.C. Hydro turned over land for three lakeshore parks on Arrow reservoir, a popular area for boating and fishing.

We are more fortunate in British Columbia than in many other areas of North America, because generation of electricity here is basically from hydroelectric developments, one of the most pollution-free sources of energy. Thermal generation at Burrard Thermal Generating Plant is from boilers fired mainly by natural gas, the cleanest fossil fuel available today. In the populous Lower Mainland, gas heating is being installed in most new homes.

B.C. Hydro also is concerned about preserving and protecting the natural environment. An important element in planning installations is the impact they will have on the surroundings. For example, after Hugh Keenleyside Dam was constructed, all cuts and fills in the earth were seeded and fertilized to develop new growth. Now, after three years, the construction scars have been largely healed, but additional seeding and fertilizing were scheduled for the spring of 1972 to strengthen the existing ground cover. At the new Kootenay Canal project, excavated material will be moved to a site where fish and wildlife will not be affected, although this will increase construction costs approximately $400,000.

Environmental considerations have led to planning of structures for transmission lines and low-profile substations that are more aesthetically appealing and blend with the landscape. In many areas frequented by the public, we seed transmission line rights-of-way with grasses to prevent erosion, and we encourage the multiple use of rights-of-way for a variety of purposes, including recreation, agriculture, Christmas tree farms, cattle grazing and parks. We have installed acoustical barriers to dampen noise at Burrard

Waterfront improvement program at Nakusp included upgrading of beach for enjoyment by swimmers and sunbathers.

Thermal Generating Plant, and we have installed noise silencers and sound barriers at a number of substations to ensure quieter operation of equipment.

We are continuing a program of providing land and financial support for development of public recreational facilities. On the Arrow reservoir, three lakeshore parks—totalling some 700 acres and including three miles of waterfront—will be open to the public in the summer of 1972 on land B.C. Hydro conveyed to the Provincial Department of Recreation and Conservation. In the same area, several other sites have been designated as potential parks. We are cooperating with the Provincial Department of Lands, Forests and Water Resources in clearing the Mica reservoir and in clearing debris and disposing of salvage from Williston Lake Reservoir. We are also cooperating with Provincial Departments in clearing stumps and snags from Stave Lake and in constructing access roads, picnic sites and hiking trails at Lake Buntzen and Stave Lake.

To encourage the underground installation of power and telephone lines, the Provincial Government has established a fund of $10 million, to be called the "Power and Telephone Line Beautification Fund". The Provincial Government will use this fund to pay one-third the cost of underground installations, with the remainder of the cost being shared equally by the municipality and utility concerned. We have received several enquiries about this program from municipalities, and we expect to participate fully in its implementation.

We are converting an automobile and a service van to use natural gas for fuel instead of gasoline. This use of natural gas causes substantially less exhaust pollution, and a test program is being conducted to determine whether other B.C. Hydro vehicles should be converted to this fuel.

In the transit service, we are modifying the engines of our diesel buses to attain a more complete combustion and thereby minimize exhaust smoke and odour. We are supporting development of plans for a rapid transit system in the Greater Vancouver area, which would reduce congestion and pollution from automobiles on the downtown streets.

Horseback riders find convenient bridle path under transmission line in South Burnaby.

We will continue our efforts to build and operate facilities in a manner that is least harmful to the natural environment. At the same time, we believe it is essential for an enlightened public to understand the problems and costs involved in meeting the energy requirements of a growing population in British Columbia.

FINANCIAL STATEMENTS

The financial statements of B.C. Hydro have been examined by Price Waterhouse & Co., the Auditors appointed by the Lieutenant-Governor in Council. The Report of the Auditors, Statement of Income, Balance Sheet and Statement of Source and Application of Funds are included in the following pages.

REPORT OF THE AUDITORS

The Lieutenant-Governor in Council,
Province of British Columbia:

We have examined the balance sheet of British Columbia Hydro and Power Authority as at 31 March 1972 and the statements of income and source and application of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of British Columbia Hydro and Power Authority as at 31 March 1972 and the results of its operations and the source and application of its funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Vancouver, British Columbia
17 May 1972

PRICE WATERHOUSE & CO.,
Chartered Accountants.

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

STATEMENT OF INCOME FOR THE YEAR ENDED 31 MARCH 1972

	1972		1971	
Gross revenues		$305,921,799		$276,944,700
Expenses:				
Salaries, wages and employee benefits		67,549,011		57,948,278
Materials and services		50,964,886		45,214,693
Grants, school taxes, etc.		20,013,289		18,594,109
Provision for depreciation		52,940,635		50,201,469
Interest on debt (Note 5)	$115,896,536		$104,950,100	
Less–				
Interest charged to construction	18,198,448	97,698,088	16,048,635	88,901,465
		289,165,909		260,860,014
Net income, transferred to earnings employed in the business (Note 7)		$ 16,755,890		$ 16,084,686

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

BALANCE SHEET AS AT 31 MARCH 1972

	1972	1971
PROPERTY ACCOUNT:		
Lands, franchises, water rights, storage dams, plants for the generation, transmission and distribution of electricity and gas, trolley coaches, motor buses, freight railway and rolling stock, etc., at cost	$2,423,853,648	$2,242,143,023
Less—		
Accumulated depreciation	463,532,358	417,189,218
	1,960,321,290	1,824,953,805
Deferred costs of dam, powerhouse and other common property (Note 1)	166,687,947	195,250,571
Unfinished construction—		
Peace River Project	34,528,609	26,229,724
Columbia River Treaty storage projects	272,708,625	211,848,782
Other	58,100,000	70,900,000
	2,492,346,471	2,329,182,882
CURRENT AND WORKING ASSETS:		
Cash	2,398,309	7,295,723
Temporary investments (Note 2)	100,371,966	70,244,877
Accounts receivable and unbilled revenues	46,893,440	41,721,183
Materials and supplies, at average cost	15,528,885	16,104,589
Prepaid expenses	690,331	598,437
	165,882,931	135,964,809
MORTGAGES AND OTHER DEFERRED ACCOUNTS RECEIVABLE	4,937,960	5,792,689
INSURANCE FUND	1,670,292	1,012,968
UNAMORTIZED DISCOUNT AND EXPENSE ON LONG-TERM DEBT AND PARITY DEVELOPMENT BONDS	19,248,906	21,027,430
	$2,684,086,560	$2,492,980,778

APPROVED ON BEHALF OF THE BOARD:

E.M. GUNDERSON, Director

F.A. SMITH, Director

	1972	1971
LONG-TERM DEBT (Notes 3 and 4)	$1,726,446,571	$1,588,300,954
PARITY DEVELOPMENT BONDS, payable on demand (Notes 4 and 5):		
7% Series AN due 15 August 1972	50,505,000	50,505,000
7% Series AT due 3 August 1973	50,505,000	50,505,000
7% Series AZ due 1 September 1974	50,505,000	50,505,000
7% Series CG due 1 September 1975	50,505,000	50,505,000
	202,020,000	202,020,000
CURRENT AND ACCRUED LIABILITIES:		
Accounts payable	64,637,997	62,670,911
Interest accrued on long-term debt and parity development bonds	34,324,153	29,658,050
Sinking fund instalments due within one year	19,640,159	17,157,888
	118,602,309	109,486,849
DEFERRED LIABILITIES	19,602,854	16,134,450
RESERVE FOR INSURANCE (Note 6)	1,670,292	1,012,968
CONTRIBUTIONS ARISING FROM COLUMBIA RIVER TREATY	462,104,986	446,732,702
CONTRIBUTIONS IN AID OF CONSTRUCTION	35,585,507	27,994,704
EARNINGS EMPLOYED IN THE BUSINESS (Note 7)	118,054,041	101,298,151
COMMITMENTS (Note 9)		
	$2,684,086,560	$2,492,980,778

The accompanying notes are an integral part of the above balance sheet.

STATEMENT OF SOURCE AND APPLICATION OF FUNDS FOR THE YEAR ENDED 31 MARCH 1972

	1972	1971
Funds provided:		
Operations—		
Net income	$ 16,755,890	$ 16,084,686
Provision for depreciation	52,940,635	50,201,469
Other	1,744,493	1,766,544
	71,441,018	68,052,699
Contributions in aid of construction	8,759,013	5,354,522
Proceeds from sales of bonds	166,182,000	218,566,664
Columbia River Treaty—		
Benefits received during year (net)	237,946	541,465
Interest	15,134,338	14,015,489
Miscellaneous	3,386,392	363,104
	$265,140,707	$306,893,943
Funds expended:		
Plant additions—		
Peace River Project	$ 34,309,293	$ 52,485,244
Columbia River Treaty storage projects	61,148,375	51,678,629
Other	122,426,420	111,821,547
	217,884,088	215,985,420
Sinking funds	23,971,686	20,806,619
Bonds matured	—	50,505,000
Increase in working capital exclusive of changes in current portion of long-term debt	23,284,933	19,596,904
	$265,140,707	$306,893,943

NOTES TO FINANCIAL STATEMENTS AS AT 31 MARCH 1972

Note 1 – Peace River Project:

Consistent with the accounting practice adopted in 1968, the construction costs of the dam, powerhouse and other common property are being transferred to plant in service by instalments proportionate to the number of completed and operational generating units in relation to the ten units presently contemplated. The transfers are to be completed not later than 31 March 1976. By 31 March 1972, six generating units were in service and consequently 60% of the costs of the dam, powerhouse and other common property had been transferred to plant in service.

The costs of the dam, powerhouse and other common property not yet transferred to plant in service are shown separately as deferred costs under property account. These costs continue to attract interest charged to construction.

Note 2 – Temporary investments:

Short-term deposits and investment receipts–	
Banks	$ 72,580,000
Other financial institutions	12,500,000
British Columbia Hydro and Power Authority parity development bonds	13,304,100
Bonds and debentures held for sinking fund requirements	1,987,866
	$100,371,966

The above investments are carried at cost, which is not in excess of market value.

Note 3 – Long-term debt:

Issued by British Columbia Hydro and Power Authority–

Bonds:	
3¼% due 1976 to 1980	$ 10,000,000
5¼% due 1981 to 1985	32,496,300
5.46% to 7.32% due 1986 to 1990	309,655,000
5% to 8% due 1991 to 1995	907,381,000
6.90% to 7¼% due 1996 to 1997	87,000,000

Issued by the former British Columbia Electric Company Limited–

First mortgage bonds, after deducting bonds redeemed in accordance with sinking fund requirements:	
3½% due to 1975	12,064,000
3¾% to 4¾% due 1976 to 1980	44,532,000
4¼% to 5% due 1981 to 1985	51,111,000
5⅛% to 6½% due 1986 to 1990	86,484,000
4% to 5¾% due 1991	14,900,000
Callable bonds:	
4% to 5½% due 1986	102,789,100
4% to 5½% perpetual	1,624,300
Sinking fund debentures, after deducting debentures redeemed in accordance with sinking fund requirements:	
5¾% due 1977	34,400,000
Carried forward	$1,694,436,700

NOTES TO FINANCIAL STATEMENTS AS AT 31 MARCH 1972 *(continued)*

Note 3 – Long-term debt *(continued)*:

Brought forward	$1,694,436,700
Issued by the former British Columbia Power Commission–	
Bonds:	
3¼% due to 1975	10,000,000
3% to 3⅝% due 1976 to 1980	27,023,000
5% due 1981 to 1985	5,149,000
3¼% to 4% due 1986 to 1990	16,300,000
3¾% to 5% due 1991 to 1992	35,224,000
Debentures:	
3¾% to 4⅜% due 1986 to 1988	65,000,000
	1,853,132,700
Exchange premium at date of issue on long-term debt payable in United States funds	9,064,345
	1,862,197,045
Less–	
Sinking funds on deposit with Trustee, Minister of Finance for the Province of British Columbia	116,110,315
	$1,746,086,730
Classification on balance sheet–	
Long-term debt	$1,726,446,571
Sinking fund instalments due within one year, included in current and accrued liabilities	19,640,159
	$1,746,086,730

The long-term debt includes $253,033,000 payable in United States funds and carried at par of exchange.

Long-term debt and sinking fund requirements for the years ended 31 March 1974 to 1977 are $21,100,000, $32,000,000, $25,600,000 and $32,200,000 respectively.

Note 4 – Guarantee by Province of British Columbia:

The Government of the Province of British Columbia has unconditionally guaranteed the principal and interest of the long-term debt and parity development bonds.

Note 5 – Interest on debt:

Gross interest	$120,495,606
Amortization of discount and expense	1,744,493
	122,240,099
Less–	
Income from sinking fund investments	6,343,563
	$115,896,536

The interest rate on Series AN, AT and AZ Parity Development Bonds was increased from 6½% to 7% effective 1 September 1970.

Note 6 – Self-insurance:

In 1969, B.C. Hydro adopted a policy of self-insurance on plant and equipment and for general liability. An insurance reserve is being accumulated by annual charges to operations commensurate with the current cost of insurance.

Fire insurance coverage has been retained with insurance companies on certain plant and equipment to comply with trust deed requirements. Insurance coverage is also maintained on major projects under construction.

Note 7 — Earnings employed in the business:

Balance as at 31 March 1971	$101,298,151
Net income for the year ended 31 March 1972	16,755,890
Balance as at 31 March 1972	$118,054,041

Note 8 — Pension plans:

Employees of B.C. Hydro are covered under contributory pension plans, and provisions are being made for current services according to the requirements of the various plans. Provision has been made for all past service costs under these plans with the exception of those relating to a contributory plan introduced effective 1 January 1965. B.C. Hydro is funding the estimated past service costs of this plan by annual payments of $393,800 over a fifteen-year period which commenced 1 April 1967.

Note 9 — Commitments:

B.C. Hydro, being the Canadian Entity required to construct three storage dams under the Columbia River Treaty, is liable to compensate the Columbia Storage Power Exchange if Mica, the only dam still under construction, is not operational by the agreed date of 1 April 1973. B.C. Hydro also has obligations relating to the operation and maintenance of the three storage dams.

Purchase commitments and contracts of B.C. Hydro for capital projects aggregated approximately $147,000,000 as at 31 March 1972, which includes contracts awarded in respect of the general commitment of B.C. Hydro to construct Mica dam as referred to in the preceding paragraph.

FINANCIAL STATISTICS

(in millions of dollars)

YEAR ENDED 31 MARCH	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
SOURCES OF REVENUE										
Electric—residential	84.9	78.3	60.7	57.7	51.5	41.6	38.1	40.6	38.5	37.4
—other	126.5	114.7	102.1	91.7	86.2	76.8	66.8	60.4	54.8	55.1
Gas	51.7	47.5	41.0	40.6	34.4	32.1	31.2	30.0	25.7	24.6
Passenger transportation	24.2*	21.3*	20.7*	19.5*	18.1	17.6	16.9	14.5	13.8	13.9
Rail freight	10.2	8.0	8.4	7.4	7.0	6.4	6.2	5.9	5.6	5.3
Miscellaneous	8.4	7.1	7.0	4.2	4.3	3.6	1.6	1.9	1.2	1.4
Total	305.9	276.9	239.9	221.1	201.5	178.1	160.8	153.3	139.6	137.7
DISPOSITION OF REVENUE										
Employment costs, materials and services	118.5	103.1	95.5	94.5	87.4	76.8	69.2	59.9	54.5	51.7
Grants, school taxes, etc.	20.0	18.6	17.0	15.0	13.3	11.3	10.6	9.9	9.1	8.4
Provision for depreciation	52.9	50.2	44.7	38.6	34.7	31.7	28.8	27.1	25.3	22.8
Interest on debt, less interest charged to construction	97.7	88.9	83.1	63.7	53.2	49.0	44.7	43.2	41.9	40.8
Employed in the business (withdrawal)	16.8	16.1	(.4)	9.3	12.9	9.3	7.5	13.2	8.8	14.0
Total	305.9	276.9	239.9	221.1	201.5	178.1	160.8	153.3	139.6	137.7
EXPENDITURES ON PLANT	217.9	216.0	189.6	227.3	341.2	324.1	227.5	105.3	70.6	54.2

**Includes metropolitan transit subsidy received from Provincial Government.*

OPERATING STATISTICS

YEAR ENDED 31 MARCH	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
ELECTRIC										
Generating nameplate capacity at year-end (rated kw in thousands)*										
Hydro	2,814	2,455	2,455	2,001	1,320	1,320	1,306	1,306	1,295	1,295
Thermal	1,038	1,059	1,056	1,055	906	752	738	588	571	570
Total	3,852	3,514	3,511	3,056	2,226	2,072	2,044	1,894	1,866	1,865
Peak one-hour demand, integrated system (kw in thousands)	2,970	2,769	2,499	2,357	2,152	1,860	1,686	1,490	1,244	1,169
Customers at year-end (in thousands)	726	690	652	605	583	555	529	503	478	459
Electricity sold to public (kwh)										
Total (in millions)	16,174	14,833	13,656	12,237	11,084	10,000	8,506	7,345	6,431	6,059
Increase over previous year (%)	9.0	8.6	11.6	10.4	10.8	17.6	15.8	14.2	6.1	9.4
By class of customer (%)										
Residential	28	28	27	28	28	28	30	31	32	32
Commercial	22	21	21	21	21	20	21	22	23	22
Industrial	48	47	48	49	49	50	48	45	43	44
Other systems	1	1	2	2	2	2	1	2	2	2
Export**	1	3	2	–	–	–	–	–	–	–
Residential service										
Average annual kwh use per customer	7,342	6,949	6,651	6,674	6,222	6,016	5,650	5,486	5,200	5,029
Average revenue per kwh (cents)	1.9	1.9	1.7	1.7	1.7	1.5	1.5	1.8	1.8	1.9
**Excludes electricity available from other systems. Rated capacity has been exceeded on occasion.*										
***Less than ½ of 1% 1963 through 1969.*										
GAS										
One-day capacity at year-end (therms in thousands)										
Mainland—firm pipeline contracts*	2,400	2,460	2,360	2,529	2,260	2,140	2,020	1,900	1,780	1,780
—plant	1,000	1,000	250	250	250	250	250	250	250	250
Greater Victoria—plant	53	53	45	45	36	36	36	36	36	36
Peak one-day demand (therms in thousands)										
Mainland system—including interruptible	3,279	2,939	2,770	3,108	2,537	2,634	2,593	2,341	1,359	1,580
—excluding interruptible	3,065	2,762	1,962	2,889	1,905	1,474	1,493	1,849	1,060	1,342
Greater Victoria system	29	22	19	24	19	16	17	23	16	18
Customers at year-end (in thousands)	215	205	197	186	178	169	161	153	145	137
Gas sold to public (therms)										
Total (in millions)	601	554	485	470	391	357	322	306	260	240
Increase over previous year (%)	8.5	14.2	3.1	20.2	9.6	10.7	5.3	17.7	8.6	10.3
Average revenue per therm (cents)	8.6	8.6	8.4	8.6	8.8	9.0	9.7	9.8	9.9	10.3
**On basis of 100 cu. ft. to one therm.*										
PASSENGER TRANSPORTATION										
Vehicles at year-end										
Urban—buses	326	353	340	339	340	321	325	336	339	334
—trolley coaches	298	298	296	296	296	296	296	296	312	317
—total	624	651	636	635	636	617	621	632	651	651
Interurban buses	90	85	66	71	70	56	61	70	80	81
Passengers carried (in millions)										
Urban	72.6	65.9	78.7	77.4	74.6	72.7	70.7	73.1	75.8	77.3
Interurban	2.5	2.2	2.3	2.2	2.1	2.1	2.0	2.0	2.3	2.5
Revenue miles run—urban (in millions)	20.0	19.3	21.2	20.9	20.8	20.5	20.4	20.5	20.5	20.5
Passenger revenue per mile—urban (cents)	83.7	78.9	71.6	72.1	71.2	70.2	68.4	57.7	52.8	54.0
RAIL FREIGHT (tons in thousands)	2,606	2,200	2,466	2,265	2,057	2,011	1,971	1,832	1,663	1,567
EMPLOYEES AT YEAR-END										
Regular	7,173	7,205	7,056	6,905	6,737	6,452	6,250	6,006	5,761	5,641
Temporary	669	481	810	717	614	687	647	418	451	328
Total	7,842	7,686	7,866	7,622	7,351	7,139	6,897	6,424	6,212	5,969

DIVISIONAL ORGANIZATION

Office of the Chairman

D.C. DUFF
Executive Assistant to the Chairman
H.A. ELLIOTT
Coordinator of Administration
G. GRIFFITHS
Manager, Manpower Development and Educational Services
W.D. KENNEDY
Manager, Canadian Entity Services
G.G. WOODWARD
Corporate Secretary

Office of Chief Engineer

H.K. PRATT
Chief Engineer

Engineering Division

H.M. ELLIS
Division Manager
J.S. DAVIDSON
Manager, Commissioning and Acceptance
W.F. GEIST
Manager, Quality Control and Expediting
W.D. GILL
Manager, System Projects and Design
H.J. GOLDIE
Manager, System Planning and Development
J.F. MILES
Manager, Generation Planning
E.W. NEWBURY
Manager, Engineering Services
W.M. WALKER
Executive Assistant, Engineering Division

Construction Division

E.H. MARTIN
Division Manager
R.B. JACKSON
Construction Manager, Mica Project
W.E. LYLE
Manager, Hydro Force Construction
E.T. QUIRK
Construction Manager, Whatshan Redevelopment and Kootenay Canal Project
R.H. SPINNEY
Construction Manager, Gordon M. Shrum Generating Station
A.G. TANNER
Manager, Contract Construction
W.S. WALKER
Construction Manager, Jordan River Redevelopment
J.P. WEST
Manager, Project Equipment

Production Division

G.F. GREEN
Division Manager
W.A. BATEMAN
Manager, Maintenance Control
T.M. BERGER
Area Manager, Southern Interior
M.A. FAVELL
Area Manager, Central Interior
P.J. FLETCHER
Manager, Burrard Thermal Generating Plant
W.E. KENNY
Manager, Operations Control
N.S. KENT
Area Manager, Lower Mainland
E. MARZOCCO
Area Manager, Vancouver Island

Distribution Division

J.N. OLSEN
Division Manager
W.A. BEST
Regional Manager, Central Interior
S.C. BURNELL
Regional Manager, Metropolitan
T.V. FARMER
Regional Manager, Southern Interior
W.B. GALE
Manager, Distribution Services
D.J. McLENNAN
Regional Manager, North Coast
A.J. MACDONALD
Regional Manager, Vancouver Island
G.J. ROPER
Regional Manager, Fraser Valley
R.G. SCOTT
Marketing Services Manager
H.E. SLADEN
Senior Distribution Engineer

Gas Division

R.K. KIDD
Division Manager
J.L. GEMMELL
Manager, Metropolitan Distribution
K.S. HENDERSON
Manager, Fraser Valley Distribution
N.M. KING
Manager, Staff Services
A.H. MacPHERSON
Manager, Engineering
C. SHALANSKY
Manager, Victoria Gas
G.A. THOMSON
Superintendent, Gas Supply

Transportation Division

P.W. BARCHARD
General Manager of Transportation
H.C. GIVINS
Manager, Transportation Maintenance
H.R. HALLS
Manager, Victoria Transportation
W.W. McAULAY
Operations Manager, Metropolitan Transit Lines
D.J. MARTIN
Manager, Railway Operations
A.S. MURIE
Manager, Transportation Staff Services
T.A. ROSS
Manager, Pacific Stage Lines Operations

Financial Division

T. CHAMBERS
Division Manager and Chief Financial Officer
L.E. BEARD
Comptroller
G.F. BLYTH
Cashier Manager
D. DAVIS
Manager, Customers' Accounts
G. EWING
Manager, Budget and Control
D.R. HUNDLEBY
Pay Manager
S.H. JAGGER
Stores Manager
I.R.A. MILLS
Treasurer and Registrar
S.B. PEACH
Manager, Purchasing
A.L. ROLLINS
Manager, Plant Accounting
G.A. WOODBURY
Assistant to Chief Financial Officer

Legal Division

W.D. MITCHELL
Division Manager and General Solicitor
J.C. BLEWETT
Senior Solicitor
W.M. PHILIP
Senior Solicitor
D.W. PRATT
Senior Solicitor

Computer and Management Systems Division

T.A. NORDSTROM
Division Manager
B.A. ANGEL
Manager, Computer Sciences
E.S. GARDINER
Manager, Data Processing
J.A. POLSON
Manager, Economic Analysis
J.A.D. SIMPSON
Manager, Commercial Management Systems

Administration Division

D.G. McKILLOP
Division Manager
R.H. DOWNEY
Manager, Manpower and Organization Planning
M.H. FOX
Manager, Labour Relations
B.A. HAWRYSH
Manager, General Services
R.H. LUND
Manager, Personnel Services
J.V. MILBURN
Manager, Safety Engineering
A.K. YOUNG
Director, Health Services

Corporate Services Division

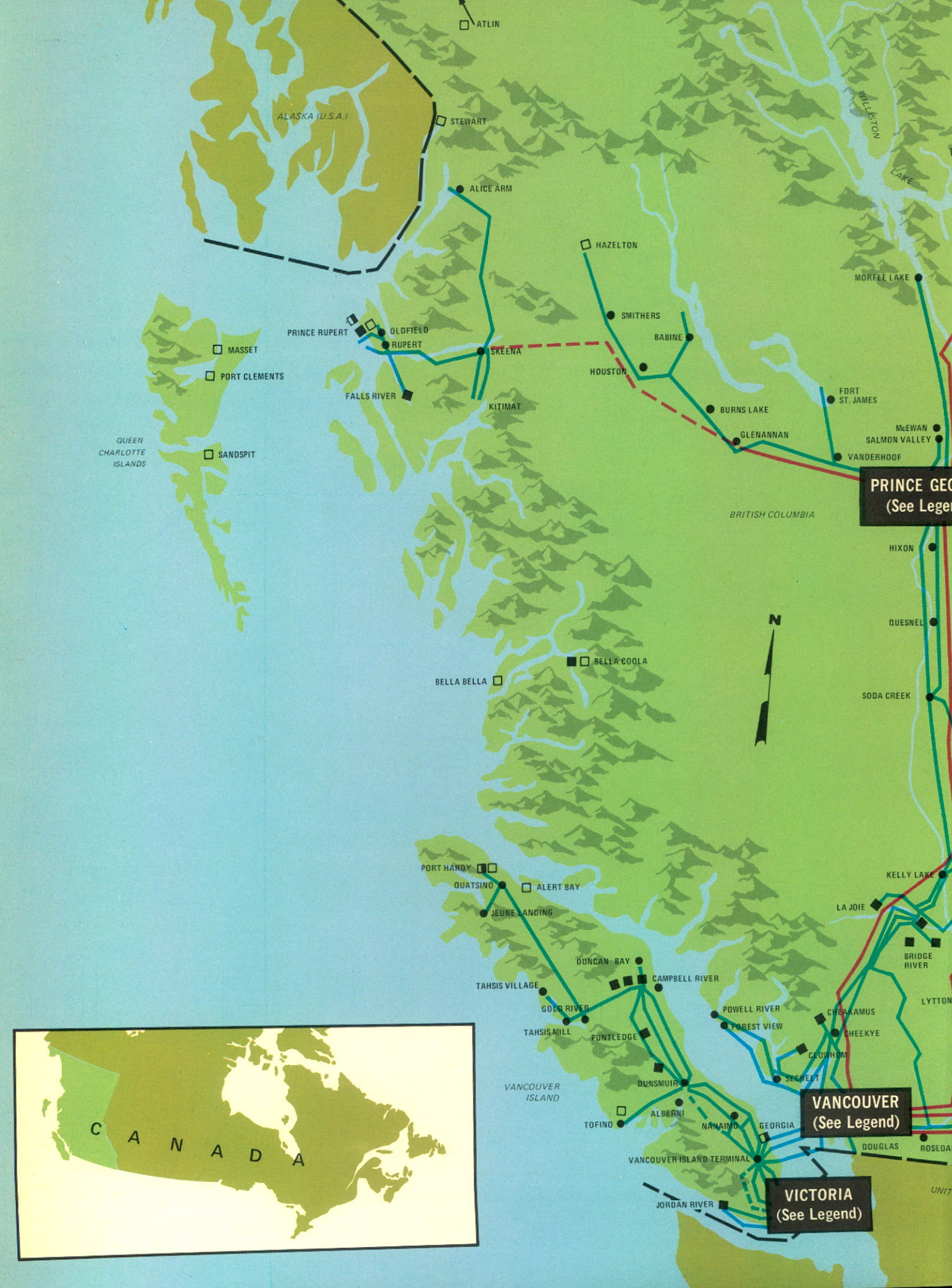
C.W. NASH
Division Manager
G. BARNETT
Manager, Rates and Costs
J.R. BRASSINGTON
Manager, Load Development
E.S. COLLINS
Manager, Land
P.I. GRANT
Manager, Industrial Development
J.A. MacCARTHY
Manager, Information Services

Internal Audit Department

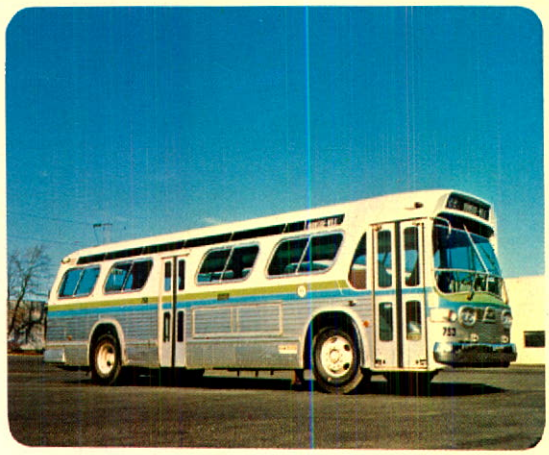
J.S. LANG
Internal Auditor

FOLD OUT MAP OF ELECTRIC TRANSMISSION SYSTEM


BRITISH COLUMBIA HYDRO AND POWER AUTHORITY
ELECTRIC TRANSMISSION SYSTEM AT 31 MARCH 1972 WITH PLANNED ADDITIONS
LEGEND
HYDROELECTRIC GENERATING STATIONS
DIESEL-ELECTRIC GENERATING STATIONS
GAS-TURBINE-ELECTRIC GENERATING STATIONS
SUBSTATIONS
TRANSMISSION LINES 60 KV-360 KV (EXISTING AND UNDER CONSTRUCTION)
TRANSMISSION LINES 500 KV (EXISTING AND UNDER CONSTRUCTION)
TRANSMISSION LINES 60 KV-360 KV (PLANNED)
TRANSMISSION LINES 500 KV (PLANNED)
VANCOUVER AREA
MAJOR GENERATING PLANTS
Alouette: Hydroelectric
Burrard: Steam-Turbine
Lake Buntzen: Hydroelectric
Port Mann: Gas-Turbine
Ruskin: Hydroelectric
Stave Falls: Hydroelectric
MAJOR SUBSTATIONS
Arnott
Camosun
Cypress
Dal Grauer
Horne-Payne
Ingledow
Kidd, Nos. 1 and 2
Mainwaring
Murrin
Newell
Walters
VICTORIA AREA
MAJOR SUBSTATIONS
Esquimalt
George Tripp
Goward
Horsey
PRINCE GEORGE AREA
MAJOR SUBSTATIONS
Canreed
Patricia
Pineview
Prince George
Northwood
Williston
FORT NELSON
A.C. BENNETT DAM
GORDON M. SHRUM
BOUNDARY LAKE
FORT ST. JOHN
PEACE RIVER
PORTAGE PASS
CHETWYND
DAWSON CREEK
UPPER FRASER
McBRIDE
WELLS
VALEMOUNT
WILLIAMS LAKE
BOSS MOUNTAIN
BLUE RIVER
MICA
MICA DAM PROJECT
AVOLA
VAVENBY
100 MILE HOUSE
BARRIERE
HEFFLEY CREEK
SAVONA
KAMLOOPS
HIGHLAND
NICOLA
MERRITT
BOSTON BAR
WESTBANK
GREATA
PRINCETON
HOPE
WAHLEACH
NOKA
SHUSWAP
VERNON
COLUMBIA RIVER
REVELSTOKE
GOLDEN
SPILLIMACHEEN
ATHALMER
NAKUSP
DUNCAN DAM
CANAL FLATS
WHATSHAN LAKE
WHATSHAN
NEW DENVER
KIMBERLEY
FERNIE
NATAL
ELKFORD
CRANBROOK
ABERFELDIE
CROWSNEST
ELKO
KOOTENAY CANAL
HUGH KEENLEYSIDE DAM
TRAIL
7 MILE
KINGSGATE YAHK
ALBERTA
STATES OF AMERICA
40 30 20 10 0 40 80 120 160 MILES

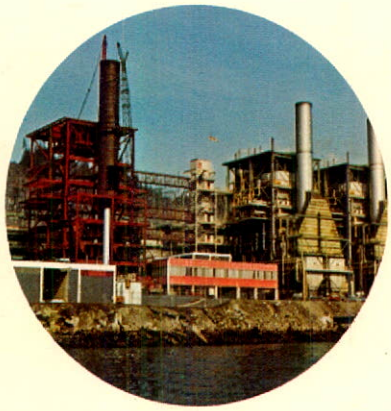

ATLIN
ALASKA (U.S.A.)
STEWART
ALICE ARM
HAZELTON
MORFEE LAKE
MILLISTON LAKE
SMITHERS
PRINCE RUPERT
OLDFIELD
RUPERT
SKEENA
BABINE
MASSET
PORT CLEMENTS
HOUSTON
FALLS RIVER
KITIMAT
FORT ST. JAMES
BURNS LAKE
McEWAN
SALMON VALLEY
GLENANNAN
VANDERHOOF
QUEEN CHARLOTTE ISLANDS
SANDSPIT
PRINCE GEO
(See Legen
BRITISH COLUMBIA
HIXON
QUESNEL
N
BELLA COOLA
BELLA BELLA
SODA CREEK
PORT HARDY
QUATSINO
ALERT BAY
KELLY LAKE
LA JOIE
JEUNE LANDING
BRIDGE RIVER
DUNCAN BAY
CAMPBELL RIVER
LYTTON
TAHSIS VILLAGE
GOLD RIVER
POWELL RIVER
CHEAKAMUS
FOREST VIEW
CHEEKYE
TAHSIS MILL
PUNTLEDGE
CLOWHOM
SECHELT
DUNSMUIR
VANCOUVER ISLAND
VANCOUVER
(See Legend)
TOFINO
ALBERNI
NANAIMO
GEORGIA
DOUGLAS
ROSEDA
VANCOUVER ISLAND TERMINAL
VICTORIA
(See Legend)
JORDAN RIVER
CANADA

1962 – Diversion tunnels for Peace River Project.

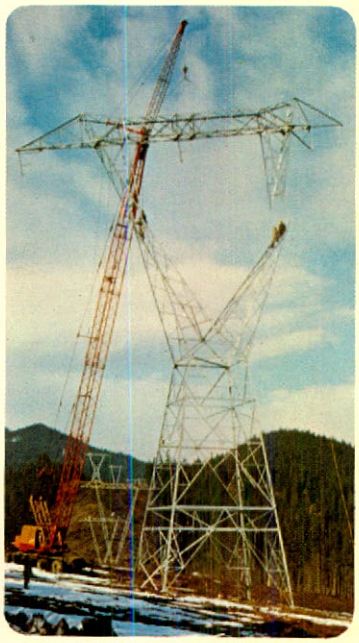


1963 – Start of renewal program for transit fleet.

1964 – Columbia River Treaty ceremony.

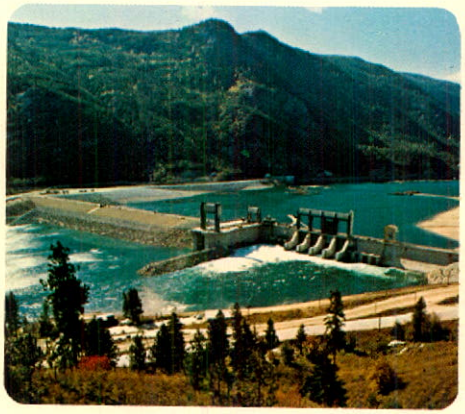


1965 – Third unit at Burrard Thermal.

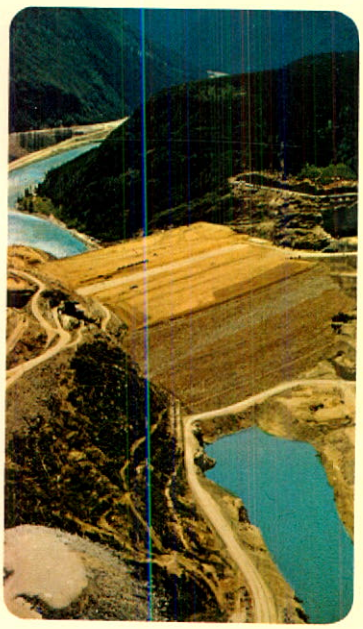


1966 – Building 500 kv line.

1967 – Duncan Dam official dedication.



1968 – Hugh Keenleyside Dam in service.



1971 – Mica Dam construction.

1969 – Cable-laying for HVDC intertie.

1970 – Storage of liquefied natural gas.